

### REMARKS

Claims 1-4, 7-13, and 15-23 remain pending in the current Application. Claims 1, 7, 10, 16-20, and 22 have been amended; claims 5, 6, and 14 have been cancelled; and claim 23 has been added. Applicants submit that the amendments do not add new matter to the current Application. All the amendments herein have been made in order to clarify the claims and not for prior art reasons. Applicants also submit that (1) no amendment made was related to the statutory requirements of patentability unless expressly stated herein, and (2) no amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

#### Rejection of claims 1-8 and 17-22 under 35 U.S.C. 103(a)

Applicant respectfully submits that claims 1-8 and 17-22 are patentable over US Patent No. 6,593,807 (hereinafter referred to as Groves) and US Patent No. 6,587,670 (corresponding to EP 1014566A2 and hereinafter referred to as Hoyt). With respect to claim 1, Applicants have amended claim 1 to further define the input signal as digital and to include the sample rate converter of dependent claim 6. Applicants submit that Groves, Hoyt, nor their combination, teach or suggest these limitations. For example, while Groves discusses a digital input, it does not teach or suggest a sample rate converter as claimed in claim 6. That is, since Groves does not teach or suggest adjusting the data rate or switching frequency, there is no need in Groves for a sample rate converter. That is, once the switching frequency is set, it is not changed in response to an indicator signal. Therefore, for at least these reasons, Groves does not teach or suggest the sample rate converter of claim 1. Furthermore, Hoyt does not teach or suggest the sample rate converter of claim 1. Hoyt only discusses an analog system, and therefore also does not require or suggest a sample rate converter. The sample rate converter of claim 1 is used, for example, to ensure that when the PWM switching rate is changed (to prevent interference), the sample rate remains synchronized with the switching rate of the PWM. Hoyt does not need to address this issue because the input is received as an analog signal, and although further processing in Hoyt may be done with analog or digital circuitry, Hoyt does not teach or suggest

the use of a sample rate converter. Therefore, for at least these reasons, Applicants submit that Groves and Hoyt, alone or in combination, do not teach or suggest each and every limitation of claim 1.

Claims 2-8 have not been independently addressed because they depend directly or indirectly from allowable claim 1, and are therefore allowable for at least those reasons stated above with respect to claim 1.

Applicants have also added a new claim 23 which includes receiving a digital signal from the tuner and responding to the tuner frequency by modifying a sample rate of the input digital signal in response to an indicator signal if the switching signal causes interference with the input digital signal. Applicants submit that neither Hoyt, Groves, nor combination, teach or suggest these elements. As discussed above, Groves does not teach or suggest modifying a sample rate of the input digital signal. Similarly, Hoyt does not teach or suggest modifying the sample rate of the input digital signal. That is, Hoyt only discusses changing the input frequency of the AM oscillator and does not teach or even suggest modifying a sample rate of an input digital signal. Therefore, for at least these reasons, Applicants submit that added claim 23 is allowable over Hoyt and Graves, alone or in combination.

Claims 17-22 have been amended, as needed, such that they all depend directly or indirectly from allowable claim 23. Therefore, they are all allowable for at least those reasons provided above with respect to claim 23.

**Rejection of claims 9-16 under 35 U.S.C. 103(a)**

Applicant respectfully submits that claims 9-16 are patentable over Hoyt in view of Groves. For example, claim 9 claims an interference detection means for changing the switching frequency that is indicated by the indicator signal if the input signal has interference from the switching output signal. The Examiner states that Hoyt teaches this because Hoyt teaches a method "for making intelligent control decisions about the switching frequency of a class D amplifier that does not interfere with a nearby AM radio." However, Hoyt does so by affecting the AM local oscillator. Hoyt does not detect if interference is present, and based on this detection, changes the switching frequency. That is, the interference detection means of claim 9 is able to modify the switching frequency as needed without needing any input as to what the

tuning frequency is. Also, the section of Hoyt cited by the Examiner which states "a second embodiment uses two or more oscillators and tests for the least distorted output signal" does not teach or suggest the limitations of claim 9. For example, this statement indicates that two or more oscillators are used and outputs from each oscillator are then tested such that the best oscillator may be chosen. However, this statement does not teach that the switching frequency is changed *in response to* detecting interference. Also, the ability to change the frequency in response to detecting interference, as claimed in claim 9, prevents the need for having to use two or more oscillators and then test each of those outputs to determine the best one. Furthermore, Groves also does not teach or suggest this limitation. Therefore, for at least these reasons, Applicants submit that claim 9 is allowable over Hoyt in view of Groves since neither Hoyt, Groves, nor their combination teach or suggest the limitations of claim 9.

Applicants have amended claim 10 and 16 to also include changing the frequency in response to detecting interference, and therefore, the same arguments provided above with respect to claim 9 also apply to claims 10 and 16. Therefore, Applicants submit that claims 10 and 16 are also allowable over Hoyt in view of Groves. Also, claims 11-15 depend directly or indirectly from allowable claim 10 and are therefore also allowable for at least those reasons provided for claim 10.

Conclusion

Although Applicants may disagree with statements made by the Examiner in reference to the claims and the cited references, Applicants are not discussing all these statements in the current Office Action, yet reserve the right to address them at a later time if necessary.

Applicant respectfully solicits allowance of the pending claims. Contact me if there are any issues regarding this communication or the current Application.

If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 502117.

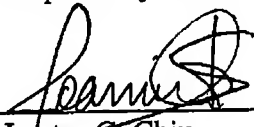
Respectfully submitted,

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